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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
FOX, BRYAN J	

ART UNIT	PAPER NUMBER
2686	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/989,056	SEGAWA, SATOKO	
	Examiner	Art Unit	
	Bryan J. Fox	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,4,6,9,12-18,20 and 21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3, 4, 6, 9, 12-18, 20 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3, 4, 6, 9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al (US005732326A) in view of Wicks et al (US006060995A).

Regarding **claim 3**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base

station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world." The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means comprising a communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting

identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal; and a user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The resultant combination reads on the claimed "interactive communication."

Regarding **claim 4**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that

limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means comprising a communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al fails to teach the inputting of information or providing all user-sent information that has been accumulated as history of a predetermined period of time prior to login to user terminals that have newly logged into the communication channel.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal, and user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel". The nightlife information database storing the information (see column 5, lines 7-22) reads on the claimed "the user-sent information providing

means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." The pager may be provided with an information inquiry icon, which, when selected, a request for nightlife information is transmitting to the service provider and corresponding information is provided (see column 5, lines 46-65), which reads on the claimed "providing all user-sent information that has been accumulated as history of a predetermined period of time prior to login to user terminals that have newly logged into the communication channel, and thereafter exchanging user-sent information among user terminals that are logged in as chat," wherein the user may send another request and receive more information, fulfilling the claimed immediately exchanging user-sent information among user terminals that are logged in as chat.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and request in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The resultant combination reads on the claimed "interactive communication."

Regarding **claim 6**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60

and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means comprising a

communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al further discloses a system with an exchange 15 (see figure 1), which reads on the claimed "supervisor terminal outside the limited space of the real world" and a radio base station 14a that communicates with the exchange 15, which reads on the claimed "communication means comprises an external communication means for external communication with the supervisor terminal". The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 (see column 5, lines 4-25), which reads on the claimed "the supervisor terminal comprises a channel login means for logging into the communication channel on which communication has become possible with the external communication means". Maruyama et al fails to teach the inputting of information or providing user inputted information based on keyword classifications and statistical qualities.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27)

and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal; and a user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." Users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means". The information stored in the user profile reads on the claimed "user-sent information collecting means for collecting the sent records of user-sent information that has been stored by the user-sent information storage means, a user-sent information database accumulating the user-sent information that has been collected." The matching of information in the user profile and the nightlife database (see column 5, lines 55-60) reads on the claimed "keyword classification means for classifying by keyword the content of the user-sent information in the user-sent information database, a user-sent information analyzing means for analyzing statistical qualities of the user-

sent information that has been classified by keyword." Sending the matching information (see column 5, lines 55-60) reads on the claimed "direct electronic mail sending means for sending information that is associated with the keyword classification to the user terminal that has sent the user-sent information that has been classified by keyword."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and matching between profiles and the database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6) and to provide the most relevant information to a user. The resultant combination reads on the claimed "interactive communication."

Regarding **claim 9**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer

to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means comprising a communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al further

discloses a feeble signal generator 12a that transmits the number of the corresponding exhibit through a feeble signal to the portable terminal unit 13a which receives the number (see column 4, lines 54-63), which reads on the claimed "the communication channel identification information transmission means includes a communication channel identification information notifying means for notifying the assigned transmission channel identification information wirelessly; and the communication channel identification information sensing means further comprises receiving means sensing communication channel identification information that has been notified wirelessly from the communication channel identification information notifying means". Maruyama et al further a system with an exchange 15 (see Maruyama et al figure 1), which reads on the claimed "supervisor terminal outside the limited space of the real world" and a radio base station 14a that communicates with the exchange 15, which reads on the claimed "the second communication means comprises an external communication means for external communication with the supervisor terminal". The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 (see Maruyama et al column 5, lines 4-25), which reads on the claimed "the supervisor terminal comprises a channel login means for logging into the communication channel on which

communication has become possible with the external communication means". Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal; and a user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." Users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see Wicks et al column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." Users may also input information which

gets stored in database 45 and sent to other subscribers whose profile it matches (see column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means". The information stored in the user profile reads on the claimed "user-sent information collecting means for collecting the sent records of user-sent information that has been stored by the user-sent information storage means, a user-sent information database accumulating the user-sent information that has been collected." The matching of information in the user profile and the nightlife database (see column 5, lines 55-60) reads on the claimed "keyword classification means for classifying by keyword the content of the user-sent information in the user-sent information database, a user-sent information analyzing means for analyzing statistical qualities of the user-sent information that has been classified by keyword." Sending the matching information (see column 5, lines 55-60) reads on the claimed "direct electronic mail sending means for sending information that is associated with the keyword classification to the user terminal that has sent the user-sent information that has been classified by keyword."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and matching between profiles and the database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4,

line 63 – column 5, line 6) and to provide the most relevant information to a user. The resultant combination reads on the claimed "interactive communication."

Regarding **claim 20**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication control program for controlling a communication means for providing a communication channel enabling...communication between the users in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal processing program comprising a processing operation of sensing identification information of

communication channels that have been provided by the communication means". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login processing operation of selecting communication channels based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing processing program comprising a processing operation of logging into user terminals by a assigning communication channel to user terminal present in the limited space of the real world". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission processing operation of transmitting identification information of an assigned communication channel to a user terminal". Maruyama et al further discloses a system with an exchange 15 (see Maruyama et al figure 1), which reads on the claimed "supervisor terminal that is outside the limited space of the real world" and a radio base station 14a that communicates with the exchange 15, which reads on the claimed "external communication with the processing program for the supervisor terminal". The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 (see Maruyama et al column 5, lines 4-25), which reads on the claimed "the processing program for the supervisor terminal further comprises a channel login operation of logging into the

communication channel with which the external communication program has enabled communication." Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "communication application for sending and receiving information via the communication channel" and "user-sent information storage processing operation of storing information that has been sent by a user terminal via the communication channel; and a user-sent information providing processing operation of providing information stored in the user-sent information storage processing operation to the user terminal accessible via the communication channel". Users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see Wicks et al column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, and wherein the processing program for the supervisor terminal can exchange information with the processing programs for the user terminals in the limited space of the world via the virtual communication space providing means".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al

(see column 4, line 63 – column 5, line 6). The resultant combination reads on the claimed "interactive communication."

Regarding **claim 21**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1), which reads on the claimed, "method of providing a virtual communication space based on sensed information to enable communication between users." The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) and the portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "sensing identification information of a terminal used by a user to identify a communication

channel assigned to the virtual communication space." Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "enabling the user to exchange information and actively communicate with other users that share a common interest via the virtual communication space."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al in view of Wicks et al as applied to claim 1 above, and further in view of Hollenberg (US006091956A).

Regarding **claim 12**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4,

lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means

comprising a communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al further a system with an exchange 15 (see Maruyama et al figure 1), which reads on the claimed "supervisor terminal outside the limited space of the real world" and a radio base station 14a that communicates with the exchange 15, which reads on the claimed "the second communication means comprises an external communication means for external communication with the supervisor terminal". The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 (see Maruyama et al column 5, lines 4-25), which reads on the claimed "the supervisor terminal comprises a channel login means for logging into the communication channel on which communication has become possible with the external communication means". Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column

2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal; and a user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." Users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see Wicks et al column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means". The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time." Users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means". The information stored in the user

profile reads on the claimed "user-sent information collecting means for collecting the sent records of user-sent information that has been stored by the user-sent information storage means, a user-sent information database accumulating the user-sent information that has been collected." The matching of information in the user profile and the nightlife database (see column 5, lines 55-60) reads on the claimed "keyword classification means for classifying by keyword the content of the user-sent information in the user-sent information database, a user-sent information analyzing means for analyzing statistical qualities of the user-sent information that has been classified by keyword." Sending the matching information (see column 5, lines 55-60) reads on the claimed "direct electronic mail sending means for sending information that is associated with the keyword classification to the user terminal that has sent the user-sent information that has been classified by keyword."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and matching between profiles and the database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6) and to provide the most relevant information to a user. The combination of Maruyama et al and Wicks et al fails to teach the use of a communication channel identification information display means. The resultant combination reads on the claimed "interactive communication."

In a similar field of endeavor, Hollenberg discloses a situation information system where a user can use a bar-code reader built into a device to search and receive information about plants, animals or the like that they encounter in a zoo (see column 6, lines 60-64). The display of the bar code reads on the claimed "communication channel identification information display means is a communication channel identification information display means for displaying the assigned communication channel identification information", and the built-in bar-code reader reads on the claimed "communication channel identification information sensing means is a reading means for reading the communication channel identification information displayed by the communication channel identification information display means".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Hollenberg to include the above built-in bar-code reader in order to allow a user to save time by obtaining product pricing information by scanning the UPC of a product in a store instead of waiting in line as suggested by Hollenberg (see column 2, lines 16-23).

Claims 13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maruyama et al in view of Wicks et al, and further in view of Kolev et al (US006148176A).

Regarding **claim 13**, Maruyama et al discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each

exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). The audio response equipment 21 reads on the claimed virtual communication space, the exhibits read on the claimed sensed information of the real world and the audio files correspond to information that is shared in the real world. The radio base station 14a transmitting the audible sound signals to the portable terminal unit 13a (see column 5, lines 20-25) reads on the claimed "communication medium providing a communication channel...in a limited space of the real world". The portable unit 13a receiving the signal from the exhibit as described above reads on the claimed "user terminal comprising communication channel identification information sensing means for sensing identification information of a communication channel that has been assigned in that limited space of the real world". The portable unit requesting from the radio base station 14a the audio files corresponding to the exhibit as described above reads on the claimed "channel login means for selecting a communication channel

based on the communication channel identification information". The audio response equipment reads on the claimed "virtual communication space providing means comprising a communication means". The exhibit feeble signal transmitter 12a reads on the claimed "communication channel identification information transmission means for transmitting identification information of the assigned communication channel to the user terminals," and, "means for grouping user terminals by assigning a communication channel to the user terminals present in the limited space of the real world." Maruyama et al fails to teach the inputting of information.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63), which reads on the claimed "means for inputting information" and "user-sent information storage means for storing information that has been sent by a user terminal; and a user-sent information providing means for providing information stored in the user-sent information storage means to the user terminal logged into the communication channel".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The combination of Maruyama et al and Wicks et al fails to disclose a position / communication channel correspondence

table showing a correspondence between position information and communication channel identification information. The resultant combination reads on the claimed "interactive communication."

In a similar field of endeavor, Kolev et al discloses a system where a user terminal memory stores spot beam control channel information (such as channel numbers) and the associated geographic information. Therefore, the geographic information may be used to retrieve one or more control channels which correspond to the geographic information received from the terrestrial communications system (see column 4, lines 40-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Kolev et al to include the above channel information and associated geographic information in order to reduce the time for a user to register as suggested by Kolev et al (see column 2, lines 19-36).

Regarding **claim 15**, Maruyama et al fails to expressly disclose providing user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time.

In a similar field of endeavor, Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63). The nightlife information database storing the nightlife information (see column 5, lines 7-22) also reads on the claimed "the user-sent information providing

means provides user-sent information by posting information on an electronic bulletin board that is maintained for a certain period of time."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The combination of Maruyama et al and Wicks et al fails to disclose a position / communication channel correspondence table showing a correspondence between position information and communication channel identification information.

In a similar field of endeavor, Kolev et al discloses a system where a user terminal memory stores spot beam control channel information (such as channel numbers) and the associated geographic information. Therefore, the geographic information may be used to retrieve one or more control channels which correspond to the geographic information received from the terrestrial communications system (see column 4, lines 40-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Kolev et al to include the above channel information and associated geographic information in order to reduce the time for a user to register as suggested by Kolev et al (see column 2, lines 19-36).

Regarding **claim 16**, Maruyama et al fails to disclose providing all user-sent information that has been accumulated as history of a predetermined period of time prior to login to user terminals that have newly logged into the communication channel.

In a similar field of endeavor, Wicks et al discloses that the pager may be provided with an information inquiry icon, which, when selected, a request for nightlife information is transmitting to the service provider and corresponding information is provided (see column 5, lines 46-65), which reads on the claimed "providing all user-sent information that has been accumulated as history of a predetermined period of time prior to login to user terminals that have newly logged into the communication channel, and thereafter exchanging user-sent information among user terminals that are logged in as chat," wherein the user may send another request and receive more information, fulfilling the claimed immediately exchanging user-sent information among user terminals that are logged in as chat.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and request in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The combination of Maruyama et al and Wicks et al fails to disclose a position / communication channel correspondence table showing a correspondence between position information and communication channel identification information.

In a similar field of endeavor, Kolev et al discloses a system where a user terminal memory stores spot beam control channel information (such as channel numbers) and the associated geographic information. Therefore, the geographic information may be used to retrieve one or more control channels which correspond to the geographic information received from the terrestrial communications system (see column 4, lines 40-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Kolev et al to include the above channel information and associated geographic information in order to reduce the time for a user to register as suggested by Kolev et al (see column 2, lines 19-36).

Regarding **claim 17**, Maruyama et al discloses a system with an exchange 15 (see Maruyama et al figure 1), which reads on the claimed "supervisor terminal outside the limited space of the real world" and a radio base station 14a that communicates with the exchange 15, which reads on the claimed "communication means comprises an external communication means for external communication with the supervisor terminal". The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 (see Maruyama et al column 5, lines 4-25), which reads on the claimed "the supervisor

terminal comprises a channel login means for logging into the communication channel on which communication has become possible with the external communication means". Maruyama et al fails to disclose that users may input information.

In a similar field of endeavor, Wicks et al discloses that users may also input information which gets stored in database 45 and sent to other subscribers whose profile it matches (see Wicks et al column 5, lines 14-22), which reads on the claimed "communication application for sending and receiving information via the communication channel, wherein information can be sent and received among user terminals in the limited space of the world via the virtual communication space providing means".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and request in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6). The combination of Maruyama et al and Wicks et al fails to disclose a position / communication channel correspondence table showing a correspondence between position information and communication channel identification information.

In a similar field of endeavor, Kolev et al discloses a system where a user terminal memory stores spot beam control channel information (such as channel numbers) and the associated geographic information. Therefore, the geographic information may be used to retrieve one or more control channels which correspond to

the geographic information received from the terrestrial communications system (see column 4, lines 40-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Kolev et al to include the above channel information and associated geographic information in order to reduce the time for a user to register as suggested by Kolev et al (see column 2, lines 19-36).

Regarding **claim 18**, Maruyama fails to disclose a keyword classification means for classifying by keyword user-sent information and analyzing the statistical qualities of user-sent information.

In a similar field of endeavor, Wicks et al discloses information stored in the user profile reads on the claimed "user-sent information collecting means for collecting the sent records of user-sent information that has been stored by the user-sent information storage means, a user-sent information database accumulating the user-sent information that has been collected." The matching of information in the user profile and the nightlife database (see column 5, lines 55-60) reads on the claimed "keyword classification means for classifying by keyword the content of the user-sent information in the user-sent information database, a user-sent information analyzing means for analyzing statistical qualities of the user-sent information that has been classified by keyword." Sending the matching information (see column 5, lines 55-60) reads on the claimed "direct electronic mail sending means for sending information that is associated

with the keyword classification to the user terminal that has sent the user-sent information that has been classified by keyword."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Maruyama et al with Wicks et al to include the above user inputs to a database and matching between profiles and the database in order to allow an even more effective means of gathering information by allowing users to provide information of which they become aware as suggested by Wicks et al (see column 4, line 63 – column 5, line 6) and to provide the most relevant information to a user. The combination of Maruyama et al and Wicks et al fails to disclose a position / communication channel correspondence table showing a correspondence between position information and communication channel identification information.

In a similar field of endeavor, Kolev et al discloses a system where a user terminal memory stores spot beam control channel information (such as channel numbers) and the associated geographic information. Therefore, the geographic information may be used to retrieve one or more control channels which correspond to the geographic information received from the terrestrial communications system (see column 4, lines 40-52).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al and Wicks et al with Kolev et al to include the above channel information and associated geographic information in order to reduce the time for a user to register as suggested by Kolev et al (see column 2, lines 19-36).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Maruyama et al, Wicks et al and Kolev et al as applied to claim 13 above, and further in view of Chavez, Jr (US006292672B1).

Regarding **claim 14**, the combination of Maruyama et al, Wicks et al and Kolev et al fails to expressly disclose that a user will be automatically logged out upon exiting an area.

In a similar field of endeavor, Chavez, Jr discloses a wireless system where when one terminal departs from the group, a message is sent informing other members of the terminal's departure (see column 1, lines 55-60), which reads on the claimed "the user terminal logs out of the communication channel to which it is logged in by retiring from the virtual communication space".

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Maruyama et al, Wicks et al and Kolev et al with Chavez, Jr to include the above automatic logout so that a user does not need to worry about logging out and thus providing a more user-friendly interface.

Response to Arguments

Applicant's arguments filed May 18, 2005 have been fully considered but they are not persuasive.

The applicant argues that the combination of Muruyama and Wicks fails to teach enabling an interactive communication using a virtual communication space between users in a limited space based on sensed information that is commonly shared by the

users in the real world. The examiner respectfully disagrees. As outlined in the rejection above, Muruyama discloses an information guiding system that provides information about exhibits in an art museum or the like for visitors (see column 1, lines 9-11) where a signal transmitter is disposed in the vicinity of each exhibit so as to transmit the number of the corresponding exhibit 11a through a feeble signal 12a to cordless portable terminal units carried by visitors 13a-13m (see column 4, lines 54-60 and figure 1). The portable terminal unit 13a transmits the service number for guiding to the radio base station 14a through a control channel so as to request the radio base station 14a to set a call to the audio response equipment 21, and the radio base station 14a transmits the call setting request to the exchange 15 through a wire circuit 31 and the exchange 15 sets a speech path 41a to the audio response equipment 21 in answer to the call setting request. Finally the portable terminal unit 13a transmits the audio file designating information to the audio response equipment and the audio sound signals are transmitted to the portable terminal unit (see column 5, lines 4-30 and figure 1). Muruyama is only deficient in that it does not allow a user to post messages to the system. For this, Wicks et al is relied on. Wicks et al discloses a paging system that shares nightlife information with users registered for the service (see column 2, lines 22-27) and allows users to input information to be shared to the nightlife database (see column 2, lines 54-63).

The applicant argues that the cited references fail to teach a virtual communication space corresponding to sensed information that provides all user-sent information that has been accumulated as history of a predetermined period of time

prior to login to user terminals that have newly logged into the communication channel, and thereafter immediately exchanging user-sent information among user terminals that are logged in as chat. The examiner respectfully disagrees. As outlined in the rejection of claim 16 above, Wicks et al is relied on for this limitation: Wicks et al discloses that the pager may be provided with an information inquiry icon, which, when selected, a request for nightlife information is transmitting to the service provider and corresponding information is provided (see column 5, lines 46-65), which reads on the claimed "providing all user-sent information that has been accumulated as history of a predetermined period of time prior to login to user terminals that have newly logged into the communication channel, and thereafter exchanging user-sent information among user terminals that are logged in as chat," wherein the user may send another request and receive more information, fulfilling the claimed immediately exchanging user-sent information among user terminals that are logged in as chat.

The applicant argues that the cited references fail to teach a virtual communication space corresponding to sensed information, where the user terminal logs out of the communication channel to which it is logged in by retiring from the virtual communication space or by logging into a communication channel that is assigned to another virtual communication space. The examiner respectfully disagrees. As outlined in the rejection above, Chavez, Jr. is relied on for this limitation: Chavez, Jr discloses a wireless system where when one terminal departs from the group, a message is sent informing other members of the terminal's departure (see column 1, lines 55-60), which

reads on the claimed "the user terminal logs out of the communication channel to which it is logged in by retiring from the virtual communication space".

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J. Fox whose telephone number is (571) 272-7908. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryan Fox
October 3, 2005

Marsha D Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600